BULLETIN
of the
Chicago Herpetological Society

Volume 42, Number 6
June 2007

BULLETIN OF THE CHICAGO HERPETOLOGICAL SOCIETY
Volume 42, Number 6
June 2007

On the Biological Clock of the Atlantic Bushmaster, with Regard to Reproduction . . . . . Rodrigo C. G. de Souza 89

Note on the Testicular Cycle of the Northern Scorpion-eater, *Stenorrhina freminvillii* (Serpentes: Colubridae) from Central America . . . Stephen R. Goldberg 90

The Tympanum . . . . . Raymond Hoser; Mike Dloogatch 92

What You Missed at the May CHS Meeting . . . . . John Archer 96

Herpetology 2007 99

Unofficial Minutes of the CHS Board Meeting, May 18, 2007 102

Advertisements 104

Cover: Flat-tailed tortoise, *Pyxis planicauda*. Photographed in its natural habitat by Chris Lechowicz.

STAFF

Editor: Michael A. Dloogatch—madadder0@aol.com
Advertising Manager: Ralph Shepstone

2007 CHS Board of Directors

Linda Malawy, President
Steve Sullivan, Vice-President
Andy Malawy, Treasurer
Kira Geselowitz, Recording Secretary
Cindy Rampacek, Corresponding Secretary
Erik Williams, Publications Secretary
Mike Dloogatch, Membership Secretary
Jason Hood, Sergeant-at-Arms
Josh Chernoff, Member-at-Large
Deb Krohn, Member-at-Large
Jenny Vollman, Member-at-Large
Rich Crowley, Immediate Past President

The Chicago Herpetological Society is a nonprofit organization incorporated under the laws of the state of Illinois. Its purposes are education, conservation and the advancement of herpetology. Meetings are announced in this publication, and are normally held at 7:30 P.M., the last Wednesday of each month.

Membership in the CHS includes a subscription to the monthly *Bulletin*. Annual dues are: Individual Membership, $25.00; Family Membership, $28.00; Sustaining Membership, $50.00; Contributing Membership, $100.00; Institutional Membership, $38.00. Remittance must be made in U.S. funds. Subscribers outside the U.S. must add $12.00 for postage. Send membership dues or address changes to: Chicago Herpetological Society, Membership Secretary, 2430 N. Cannon Drive, Chicago, IL 60614.

Manuscripts published in the *Bulletin of the Chicago Herpetological Society* are not peer reviewed. Manuscripts should be submitted, if possible, on IBM PC-compatible or Macintosh format diskettes. Alternatively, manuscripts may be submitted in duplicate, typewritten and double spaced. Manuscripts and letters concerning editorial business should be sent to: Chicago Herpetological Society, Publications Secretary, 2430 N. Cannon Drive, Chicago, IL 60614. **Back issues** are limited but are available from the Publications Secretary for $2.50 per issue postpaid.
Visit the CHS home page at < http://www.Chicagoherp.org> .

The *Bulletin of the Chicago Herpetological Society* (ISSN 0009-3564) is published monthly by the Chicago Herpetological Society, 2430 N. Cannon Drive, Chicago IL 60614. Periodicals postage paid at Chicago IL. **Postmaster:** Send address changes to: Chicago Herpetological Society, Membership Secretary, 2430 N. Cannon Drive, Chicago IL 60614.

Copyright © 2007.

On the Biological Clock of the Atlantic Bushmaster, with Regard to Reproduction

Rodrigo C. G. de Souza
Serra Grande Center for *Lachesis muta* Breeding
Itacaré/Bahia
BRAZIL
lachesisbrasil@hotmail.com

Introduction

In the March 2007 CHS *Bulletin* [42(3):41-43], we published some thoughts about our experience with captive reproduction of the Atlantic bushmaster, *Lachesis muta rhombeata.* In that account we stated that since we couldn't discern any size (thus age) classes in the animals we have encountered in the wild over the past six years, we have started to have doubts about the idea of a "breeding season."

With regard to South American bushmasters, there is a theory, matching reports of native people, that September–October is the time of year in which one is most likely to observe "couples" in the wild. The rationale behind this is that egg-laying would then occur in the dry summer season, some 100 days after sexual intercourse. Under this theory then, such a breeding season has evolved to ensure the highest possible survival rate for the newborn. In support, we have found eggs on 13 December and 4 January, when flooding is not common.

However, the lack of detectable size classes mentioned above, and also the fact that an actual mating was recorded in our facility on 4 January 2007, projecting egg-laying for rainy April, began to disturb what previously had seemed certain to us: that the biological clocks of these females would trigger hormonal response only during a 60–90 day stretch beginning in mid-August, when the first cold front hits the area, bringing sudden temperature drops and a rise in humidity levels.

Materials and Methods

This attempt to record mating at some "odd/unusual" time of year for South America, such as April, May or June, required a large enclosure of 24 m^2 within the Atlantic Rainforest, in prime *L. muta* territory. This enclosure, unlike all others we had built before, had no tunnels that could hide most of the activity, since our main goal was to photograph sexual activity, something never before done for *L. m. rhombeata.*

Two males and one extremely healthy, outstanding female (total length 2.30 m), were put together in this room in the end of April. And on 29 May 2007, 1500 h (yes, daylight), 77°F, 80% relative humidity, we recorded the accompanying images. As far as we know, these are the only pictures ever taken of *rhombeata*s "locked-up." I could have done a better job of photography, but I chose not to disturb the animals by completely opening the entrance door and using the flash.

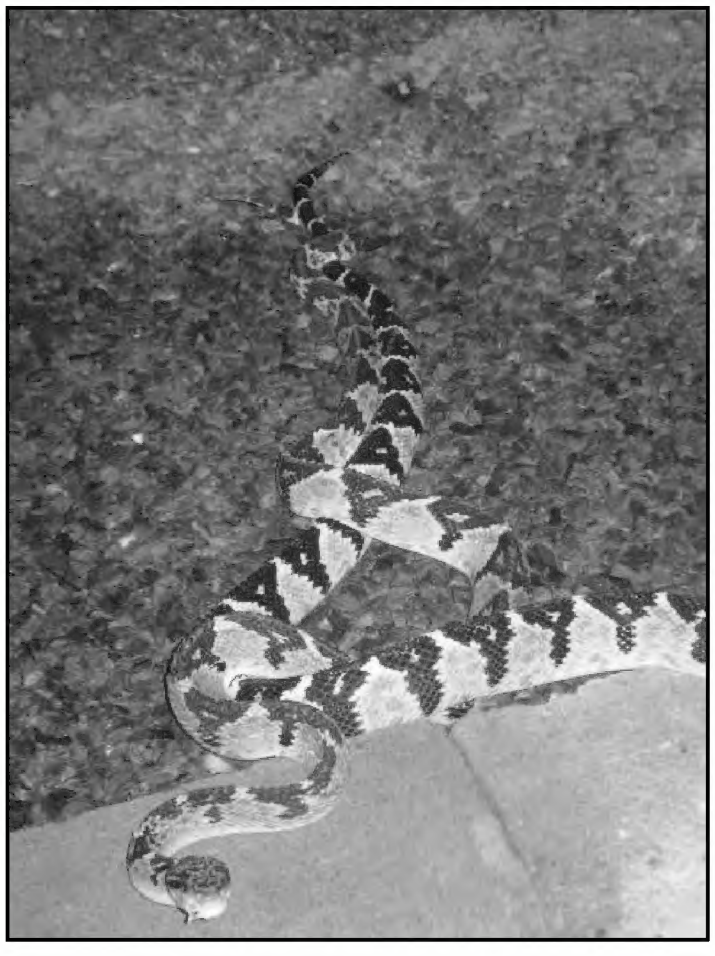
Conclusion

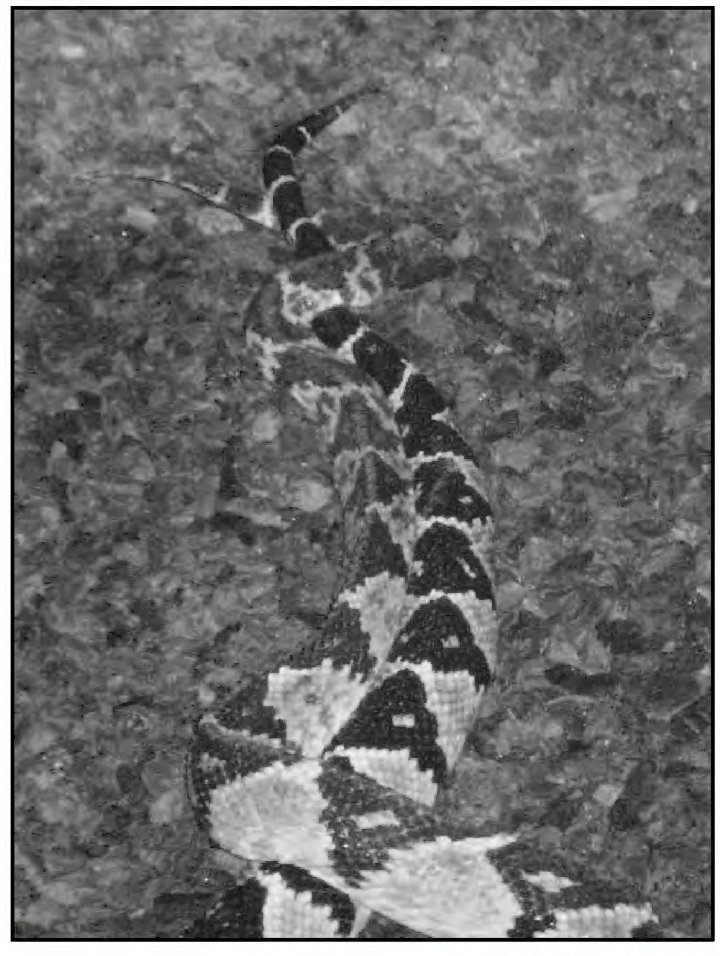
We do not know for sure if eggs are on the way, but August and September, when egg laying would take place, is not a "dry and safe" period for them around here. So, are nature's stakes based primarily on quantity? Is the biological clock set up so that a few times a year, the rare encounter of a fit pair will result in the prospect of new individuals?

Further observation will give us the answer, but undoubtedly our personal certainties are shaken. These cool-adapted creatures seem to remain reproductively active all year long in the last 7% that still remains of their natural habitat.

Acknowledgments

To Polly Matzinger, mother of the "Danger Model," who taught us that more important than to look for answers is to look for a good question to test/ask. And to the non-governmental organization, YONIC, that has financed Serra Grande.





Bull. Chicago Herp. Soc. 42(6):90-91, 2007

Note on the Testicular Cycle of the Northern Scorpion-eater, *Stenorrhina freminvillii* (Serpentes: Colubridae) from Central America

Stephen R. Goldberg
Department of Biology
Whittier College
Whittier, CA 90608

Abstract

Histological examination of testes from *Stenorrhina freminvillii* revealed that males undergo an extended period of spermiogenesis encompassing January, February, June- September and November. Tubules of the vasa deferentia contained sperm indicating the potential of insemination during these months. *Stenorrhina freminvillii* should be added to the group of Central American snakes that exhibit a prolonged period of sperm production.

The northern scorpion-eater, *Stenorrhina freminvillii*, is known from Guerrero and the Isthmus of Tehuantepec, Mexico, to central Honduras at elevations of 3 to 1435 m (Savage, 2002). Information on reproduction of female *S. freminvillii* from the Yucatan Peninsula, Mexico, is in Censky and McCoy (1988) and from Costa Rica in Savage (2002) and Solórzano (2004). The purpose of this note is to provide the first information on the timing of the testicular cycle from a histological examination of testes from museum specimens.

Methods

Fifteen *S. freminvillii* males (mean snout-vent length [SVL] = 405 mm ± 118 SD, range: 230-670 mm), collected 1962-1985, from Costa Rica, Nicaragua and El Salvador were examined from the herpetology collection of the Natural History Museum of Los Angeles County, LACM, Los Angeles, California. Specimens were collected by province (Costa Rica) and department (El Salvador and Nicaragua): Costa Rica, Guanacaste LACM 154425, 154428, 154430, 154431, 54440, 154443, San José, 154432, 154434, 154444, Puntarenas, 154422, 154429; El Salvador, Sonsonate, 114110; Nicaragua, Managua 38037, 38070, 59133. The left testis and a portion of the vas deferens were removed for histological examination. Tissues were embedded in paraffin and histological sections were cut at 5 μm. Sections were mounted on glass slides and stained with Harris' hematoxylin followed by eosin counterstain. Slides were examined to determine the stage of the testicular cycle.

The testes of all males were undergoing spermiogenesis (= sperm formation). The lumina of the seminiferous tubules were lined by spermatozoa or several rows of metamorphosing spermatids. Tubules of the vasa deferentia contained sperm. Monthly samples of spermiogenic males were: January (1), February (1), June (1), July (2), August (5), September (3), November (2). While samples were not available from all months, the presence of males undergoing spermiogenesis from most of the year indicates an extended period of spermiogenesis. The smallest spermiogenic male measured 230 mm SVL (LACM 154443) and was collected in July. Year-round breeding occurs in snakes from some aseasonal equatorial regions (Fitch, 1982). Other snakes from Costa Rica also exhibited extended periods of sperm formation: *Dendrophidion vinitor* (Goldberg, 2003a); *Drymobius margaritiferus* (Goldberg, 2003b); *Ninia maculata* (Goldberg, 2004a); *Erythrolamprus bizona*, *E. mimus* (Goldberg, 2004b); *Micrurus nigrocinctus* (Goldberg, 2004c); *Hydromorphus concolor* (Goldberg, 2006); *Geophis godmani* (Goldberg, 2007). *Stenorrhina freminvillii* should be added to this group. Further examinations of testes from other Central American snakes are needed to ascertain the prevalence of this pattern.

Acknowledgments

I thank Christine Thacker (LACM) for permission to examine *S. freminvillii*. Specimens from Costa Rica are part of the CRE collection donated to LACM by Jay M. Savage.

Literature Cited

Censky, E. J., and C. J. McCoy. 1988. Female reproductive cycles of five species of snakes (Reptilia: Colubridae) from the Yucatan Peninsula, Mexico. Biotropica 20(4):326-333.

Fitch, H. S. 1982. Reproductive cycles in tropical reptiles. Occcasional papers of the Museum of Natural History, University of Kansas, Lawrence 96:1-53.

Goldberg, S. R. 2003a. Reproduction in four species of *Dendrophidion* from Costa Rica (Serpentes: Colubridae). Transactions of the Illinois State Academy of Science 96:295-300.

————. 2003b. Reproduction in the speckled racer, *Drymobius margaritiferus* (Serpentes: Colubridae), from Mexico and Central America. Texas Journal of Science 55:195-200.

————. 2004a. Reproduction in the coffee snake, *Ninia maculata* (Serpentes: Colubridae), from Costa Rica. Texas Journal of Science 56:81-84.

———————. 2004b. Notes on reproduction in the false coral snakes, *Erythrolamprus bizona* and *Erythrolamprus mimus* (Serpentes: Colubridae) from Costa Rica. Texas Journal of Science 56:171-174.

———————. 2004c. Notes on reproduction in the Central American coral snake, *Micrurus nigrocinctus* (Serpentes: Elapidae) from Costa Rica. Caribbean Journal of Science 40:420-422.

———————. 2006. Note on the testicular cycle of the Costa Rica water snake, *Hydromorphus concolor* (Serpentes: Colubridae). Bull. Maryland Herp. Soc. 42:169-170.

———————. 2007. Note on the testicular cycle of Godman's earth snake, *Geophis godmani* (Serpentes: Colubridae) from Costa Rica. Bull. Chicago Herp. Soc. 42(1):7-8.

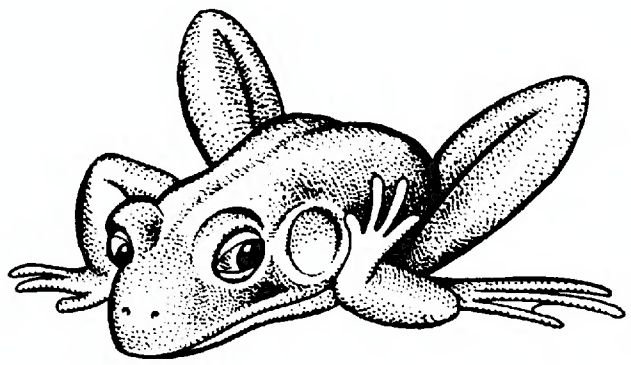
Savage, J. M. 2002. The amphibians and reptiles of Costa Rica. A herpetofauna between two continents, between two seas. Chicago: University of Chicago Press.

Solórzano, A. 2004. Snakes of Costa Rica: Distribution, taxonomy and natural history. Instituto Nacional de Biodiversidad (INBio), Costa Rica.

Bull. Chicago Herp. Soc. 42(6):92-95, 2007

The Tympanum

Call to Outlaw the Use of Tongs for Catching and Handling Deadly Snakes



While what follows is from the perspective of an Australian herpetologist, most of the issues canvassed apply equally to the North American herpetology scene. Hence it is of importance to readers of the *Bulletin of the Chicago Herpetological Society*.

To start off, I've been in the reptile game for about four decades. Unlike certain others who make such claims, my history is easily verifiable from license documents with the NSW National Parks and Wildlife service dating back to 1973 (when licenses first started) and news clips predating this, including on ABC TV news (1972/3) and international news bulletins, syndicated through Movietone News. News clips from newspapers from 1977 and later show me keeping deadly death adders and other elapids, although my license documents from 1973/4 also show me keeping elapids back then.

Besides news media clips continually in the period 1972–2007 showing my involvement with venomous and other reptiles, my first paper in a peer-reviewed scientific journal was in 1980, and many have appeared on a yearly basis since then. The first two papers I published dealt specifically with my experiences and capturing of deadly and venomous snakes.

In 1978, I became the first person in Australia with a license specifically issued for the purposes of removing snakes from houses (we call them "controllers" in Victoria). At the time there was no such license, so the NSW NPWS used a "general license" form and crossed out sections and inserted relevant bits to fit this previously unheard of license.

Before then, the rule in Australia was effectively "A good snake is a dead snake." Now in theory snakes are "protected" by law, which in theory means they shouldn't be killed. As a result people are now called to remove "nuisance" snakes, and across Australia a new breed of snake catchers has emerged. These people have licenses to catch, transport and release snakes perceived to be a threat to persons in built-up areas, farm houses, mines and other areas snakes and people meet. For most of the period 1970s to present (2007), snake catchers have used a variety of methods to catch and handle deadly snakes.

While hooks are commonly used as an aid for handling captive snakes, wild snakes tend to jump off them, so the handling methods of choice have been "tailing," pinning (then head grabbing), or variations thereof.

Now in theory the best way to "tail" a wild snake is anterior to the cloacal opening and wriggle it continually until bagged or boxed, the idea being to stop it jumping up and biting your hand. The best way to "head grab" a snake is actually by the neck and back of head, but I am sure most people reading this have an idea as to what I am talking about.

Sure some people got bitten by snakes, but that was usually a result of either a lack of experience, lack of training, a wrong attitude, or a combination of these, rather than any fundamental fault with these well-tested handling methods.

Put another way, in four decades of catching thousands of snakes, including the world's four deadliest genera, overseas taxa like rattlesnakes and so on, I've never had a serious bite from a snake (serious defined as death or antivenom). Pretty much all the bites I've had have been in the genre of "mildly venomous" taxa free-handled (midbody) on the basis of welfare considerations for the snake, rather than a forcible prevention of the snake from biting. While most snakes free-handled from the wild won't rush to bite, many do, and that's a risk I have taken countless times with mildly venomous taxa and as a result also had many (non-threatening) bites.

Enter the Tongs

In the captive realm, we offer dead (and sometimes live) mice to snakes to eat. This is one time all snakes will bite—when they eat. Because snakes aren't always accurate, they may sometimes inadvertently bite the hand that feeds them. That's where the use of tongs helps. If the snake bites the "hand" it is the tongs instead . If feeding deadly taxa like tiger snakes, this may mean the difference between life and death.

Because of the obvious common sense of tongs in these situations, tongs of some sort are now seen in use in almost every reptile keeping facility, including my own. These may include the likes of barbecue tongs, giant tweezers, forceps and so on. In 2002 we were approached by a West Australian film company, Prospero, to give permission to use the trademark "Snakebusters" for a series of so-called "documentaries" they were planning. We declined until we were provided a proper submission and as one was never given, the company was told not to use the trademark , a stand they were told from our first correspondence.

The shows, screened as "The Snakebuster" on various cable networks, became the subject of litigation and in court it was shown that a snake handler by the name of Bruce George had committed cruelty to snakes by using "tongs" to handle them. Ultimately the film company and agents had to pay us $39,500 in a court approved settlement (at end 2005). Four separate legal actions by Prospero to have my snakebuster/s trademarks quashed all failed and we therefore retain all rights.

This particular program was the first time I had ever seen tongs used to handle deadly snakes. On a smooth surface (where the tongs work best) the metal grip crushes the snake's ribs (leading to what will almost certainly be fatal injury). This outcome invariably occurs whenever tongs are used. The snakes writhe in obvious and measurable pain, making the use of tongs on snakes one of the cruelest acts conceivably inflicted by a so-called "herpetologist." On that basis I am shocked that reptile lovers around the world haven't been up in arms about this.

At the time (2004–5), I thought that the use of tongs by Bruce George and others in those shows was a "one-off," but this was not to be the case.

Following my complaints about this cruelty, a coalition of so-called "Hoser haters" automatically opposed my stance against the use of tongs. This group, including David Williams (currently of north Queensland and New Guinea), have been adversely named in Hoser books and nowadays use the internet and other forums to automatically oppose anything I say and do, no matter how idiotic their opposition is. If for example I argued Australia was in the southern hemisphere, Williams and others would SPAM the world and tell them I'm wrong and that it's in the northern hemisphere.

Such is what happened with the tongs. Before I posted against tongs, Williams was also against them. At this level he was right. Yes common sense prevailed. That was in November 2003. Once in 2003, he wrote on www.aussiepythons.com: "There has already been one instance in north Queensland where a 'graduate' of one of these ill-conceived 'training courses' [in this case a supposedly mandatory course run by the Queensland Department of Environment] was bitten by a large coastal *taipan* that he attempted to catch with a 2-foot-long pair of *tongs*." Williams also condemned the tong trainers for the way they "quite irresponsibly gives people with limited expertise a *very false sense of confidence* that will eventually get someone killed" (the highlights were his).

After it became clear that I (Raymond Hoser) was also against tongs, Williams, with no morals or scruples, reversed his tune and began posting about the virtues of tongs as part of his broad-based attack on anything "Hoser." (Williams did the same about face with venomoids, in 2003 posting on the Internet about his own failed venomoid operation on a taipan and then becoming staunchly anti-venomoid after I published details of Australia's first successful operations).

Williams posted on lots of Internet forums (e.g. venomdoc.com, aussiereptilekeeper.com and aussiepythons.com), including about his newly found virtues of tongs. Williams always asserts "authority" with a signature file aligning himself with a major institution such as a university, to attempt to give his views more credibility, the result being that impressionable novices fall for his ruse and may end up doing as he tells. This is exactly what has happened with the use of tongs, although in fairness to Williams he cannot single-handedly be totally blamed for their increased usage.

Another of the "anti-Hosers," Mark O'Shea of the UK, has even set himself up as the face of a USA-based tongs company, showing himself using tongs to handle deadly snakes, effectively inviting others to emulate him. The emulation invitation has worked here in Australia (see Gladtone Queensland reference at the end).

Here in Victoria, a novice snake handler, Simon Watharow (claiming 10 years in the reptile game) and his disciple, Sean McCarthy, now running the so-called "snakehandler" business, have also been using tongs to handle deadly snakes. McCarthy has pictures of this use of tongs on his site (snakehandler.com.au), and the suffering of the tiger snake victim is easy to see. (The site also has a photo of a red-bellied black snake with shredded neck scales as a result of excessive force being used to "pin" the snake with a stick, indicating lack of experience with venomous reptiles).

McCarthy's experience with venomous reptiles is as already inferred, limited at best, so it is a worry that he is actually teaching others about these reptiles. He apparently gets away with this by making false and misleading claims (generally unverifiable) about his experience with reptiles (claimed years in the reptile game or in the "snakehandler" business). While I have not been to one of his "courses," several people who have, have been generally dissatisfied with them for various reasons. We even have statements from disgruntled customers detailing the various defects of the courses.

However of greatest concern is that he is teaching people that it is acceptable to use tongs to handle and catch deadly snakes. I thought this was unbelievable until on Thursday 5 October 2006, I happened to be at a park in Shepparton in rural Victoria, with my wife and children, when I saw a so-called "snakehandler" trained by "snakehandler" (Watharow/McCarthy) in Melbourne catch a tiger snake in front of about 50 bystanders.

The snake was resting under a metal cylinder on an open concrete slab. To my way of thinking, capture would have been routine and easy by simply lifting the cylinder away, pinning then tailing the snake into a bag or container. The snake would have been "held" for mere seconds before being safely ensconced in a bag or box.

What actually happened was horrific. I watched this man (previously unknown to me) lift the edge of the cylinder and use a pair of metallic cripple tongs to grab a part of the snake. The snake wrapped its forebody around the part of the cylinder on the ground in a final attempt to escape and the result was an effective standoff with neither party willing to give up. The man with the tongs then tightened the grip and pulled the snake backwards.

At this point and as the snake also pulled forwards, the snake's scales were ripped off and the tongs pulled scales and flesh over the tightly held ribcage to reveal the insides of the lower half of a gravid female tiger snake. Flesh, blood, internal organs and broken bones were there for all to see. The comment was made, "better the snake end up dying, rather than me."

The same comment had been made to me by Simon Watharow in different but similar circumstances a few years earlier. On 7 December 2005 (on www.aussiereptilekeeper.com) David Williams made the similar comment: "tongs . . . in the environment in which I often work — very remote parts of PNG (and elsewhere in the world) — with no access to medical evacuation in the event of an accident, they are simply mandatory safety equipment."

However my view is that there never needed to be such a trade-off in the circumstances just described. Not only did the Shepparton "snakehandler" kill an adult tiger snake, but he also wiped out its developing litter of young. Another man present mentioned that it was no great loss "as there are millions

around here," but suffice to say that wasn't my view, even if the man was right about the snake numbers.

Since then I've seen several other fatally injured snakes that have got their injuries from the use and misuse of tongs to attempt to catch them. Earlier in 2006, I saw a snake catcher in Melbourne attempt to use a set of tongs to grab a tiger snake in heavily vegetated ground. The tongs were cumbersome and he couldn't get a grip on the fast moving snake. In the end and after watching the novice floundering with the now aggro snake for several minutes, I grabbed the tail end of the snake as it was about to go down a hole. The snake was in a plastic tub a few seconds later. That was one of the lucky ones as it was released shortly thereafter.

That snake-handler said he was amazed that I took such risks actually grabbing a wild tiger snake with my bare hands. To me this was simply routine and I never viewed myself as being at undue risk.

Now there is always a possibility that at some stage in the future, humans may develop robots to pick up snakes, prosthetic hands or even tongs that are actually sensible and safe for the snake when used. However at this stage I have seen nothing remotely approaching these ideals and on that basis the use of tongs for catching wild snakes should be shunned.

When catching wild snakes, once I have "tailed" the snake and it's in the air, the game is effectively over as far as snake capture is concerned. I can wriggle it for hours if need be without being bitten. In real terms a bag or box is usually only a few seconds away and the final scene of the capture is a snake going head first into the receptacle and it closing shut behind the snake.

In Victoria and elsewhere, snakes are supposedly "protected." This means it is illegal to kill them. They are also covered by cruelty to animals laws and various other codes of ethics, some of which are legally binding. On this basis, the use of tongs must be illegal in every state of Australia. I am sure that the same legal situation would exist in most if not all parts of the USA.

While this is obvious to anyone who sees the tongs in use against wild snakes, for reasons unknown to me, wildlife authorities in the Australian states of Victoria and Queensland have up to the present time apparently ignored this situation. For the benefit of readers, the "Prevention of Cruelty to Animals Act 1986" in Victoria, Section 9 (1) a effectively outlaws the use of tongs that cause undue pain, suffering or injury to snakes where more humane alternatives exist. More importantly, Section 9 (1) c of the act in defining cruelty says: "A person who does or omits to do an act with the result that unreasonable pain or suffering is caused, or is likely to be caused, to an animal commits an act of cruelty upon that animal and is guilty of an offence. Penalty: 60 penalty units or imprisonment for 6 months."

The important text here being "is likely to be caused," in that if a person claims to have used tongs to handle a snake, but actually avoided injuring it, the mere fact that they put the snake at undue risk of injury makes the act of using the tongs illegal. This is the same sort of law that makes driving too fast illegal. Not all fast driving causes crashes, but it is outlawed due to the increased risks.

In North America and elsewhere, where tongs are sometimes used to handle thick-set snakes like rattlers, the snakes most of the time do in fact tolerate the handling and don't tend to struggle. They effectively escape injury. However if and when a snake decides to struggle, either injury or failure to restrain the snake are the ultimate result.

Here in Australia, I have (as part of a series of tests) moved well-adjusted death adders from tank to tank with the use of BBQ tongs and also tongs marketed for snake handling. However these were snakes that didn't want to struggle. If they did, they'd be dropped rather than risk being injured by a tightened grip.

In my view, for thick-set snakes, wild ones are best caught with a pinning device, then using a second one, pinned by the head. Then the snake may be picked up by the neck (behind head), with the full body weight supported by other hand, before being released into an appropriate bag, box or whatever. Placid specimens, including captives may be moved around with appropriate hooks (that they will tend to sit on) and this is the preferred means to move captive death adders in Australia. I mention this only in as much as these snakes most resemble the North American crotalids in terms of their physique.
In terms of the degree of stress caused to a snake by the use of "tools," the general order runs, hooks (least), pinning sticks, then tongs (most), with a general allowance for variations in designs and materials used.

Obviously hands generally cause less stress to snakes than any of these, but the safety issue of free-handling generally negates this possibility for wild deadly snakes. No tongs marketed yet have anything approaching the dexterity of hands and unless and until such a device is made, my view is that tongs should not be used to handle snakes or ever be marketed as a substitute for a hand.

Frankly, the risk of injury to the snake is far too high. If a person is too afraid to use their hand to pick up a wild snake after pinning it (or as it flees via a place that prevents it from double-backing and biting), they should not be allowed to use tongs as a substitute for a pinning stick or similar. Instead these people should change their job!

By the way, stress in a snake is easily measured, and most often in the context of handling in the propensity to bite. Tong handled snakes routinely try to bite. This is the ultimate sign of pain. Pinned snakes do as well, but not quite as much. Hooked snakes as a rule generally don't rush to bite. Pain and stress in a snake are definitely measurable by the propensity to bite (after excluding other variables).

At our facility in Australia, most snakes (including the death adders) have been venomoid for some years. All these venomoids are free-handled daily and none of the venomoids are ever exposed to any kind of handling implement. None are even hooked! All cause stress to the snakes far greater than by any "free handling" and we prefer the snakes to be as stress-

free as possible. The removal of stress and pain in these snakes is measurable by the fact that the free-handled snakes almost immediately lose any urge to thrash, flee, bite or any other signs of pain, discomfort or fear.

This includes for the most fearsome and "aggressive" taxa such as supposedly intractable eastern brown snakes, coastal and inland taipans, tiger snakes, death adders and so on. (For the record, routinely free-handled elapids, including the previously named taxa are less likely to bite (per hour of handling) than similarly handled pythons, although for both groups the bites incurred in captivity are mostly "feeding bites").

Early in 2007, I approached the governments in both Queensland and Victoria to specifically outlaw the use of tongs for the purposes of attempting to catch deadly snakes. The basis of the approach was simple: the inherent risk of injury to the snake. As it happens, I also believe that they are an inferior capture method for local Australian elapids, than the use of pinning stick and/or hand/s.

Months after raising this issue with officers of DSE, they have not apparently done anything to stop this practice. I am sure that other persons with concern for reptiles and their welfare will agree with my stand. Just as I copped a lot of flack from people in the 1980s when I fought for the right of private individuals to keep reptiles, I expect flak for my stand against the use of tongs to catch and handle snakes. However, just as time found me to be correct in my views on private keeping of reptiles, so too I think time will find my views on tongs as used at the present time to be correct.

Yours sincerely in herpetology, Raymond Hoser, (Snake-busters), 488 Park Road, Park Orchards, Victoria, 3114, Australia. adder@smuggled.com

Online references/examples current (viewable on the web) as of 2 May 2007:

- http://www.aussiepythons.com/showthread.php?t= 54613 (One photo of death adder handled with tongs in a snake handling course in Queensland conducted in 2007, by an unknown person) [Editor's note: no such thread on 10 June]
- http://www.snakehandler.com.au/?pid= main&p= 25 (four photos of a tiger snake in extreme pain from gross cruelty inflicted with tongs)
- http://www.snakehandler.com.au/?pid= main&p= 59 (Photo of red-bellied black snake with neck injuries from incorrect pinning) [Editor's note: photo not found on 10 June]
- http://www.aussiepythons.com/showthread.php?t= 21311&highlight= tongs+ taipan (another example of a Queensland snake course using tongs to catch a snake and serious bite resulting, includes a post by David Williams opposing tongs posted in 2003)
- http://www.kingsnake.com/aho/research/pngfieldwork3.html (An article posted on the web in 2007 [as dated at foot of article] by David Williams now opposing Hoser by extolling the virtues of tongs to catch wild snakes [taipans])
- http://www.aussiereptilekeeper.com/modules.php?name= Forums&file= viewtopic&t= 4093&postdays= 0&postorder= asc&start= 0 (Another 2007 post by David Williams extolling the virtues of tongs as a snake handling tool)
- http://www.gladstoneobserver.com.au/storyprint.cfm?storyID= 3704984 (An article from the Gladstone Observer 12 Oct 2006, where a novice uses tongs to try to capture a coastal taipan)

I told Raymond Hoser up front that if I published his views on the use of snake tongs, I would present my own (very different) views afterward. So here they are:

Old-style snake tongs could easily be misused. A hard squeeze on the handle would translate into enough pressure to badly injure a snake. I know of snakes having been fatally injured by such tongs. But most tongs being sold these days that are designed differently. The jaws are wide, so they distribute the pressure. And they are rounded so they do not pinch. An easy test should convince anyone that these tongs will not cause pain to a snake: simply squeeze the handle as hard as you can and place a finger (or any other portion of your anatomy that will fit) between the jaws of the tongs. They exert a restraining pressure but they are not painful.

It's true that grabbing a snake in the wild with a pair of tongs will often result in the snake trying to bite the tongs. Mr. Hoser states that a pinned snake is somewhat less likely to try to bite, but he also says he doesn't use tongs to capture snakes, so I don't imagine that he has any data to prove that. I assume that's just his subjective opinion.

My own opinion is that biting is just the natural reaction of many snakes to being unexpectedly restrained. A snake might also try to bite if it is suddenly subjected to pain, but in my experience biting is such a common reaction to simple restraint that it cannot be considered an indication that the snake is in pain. I base this opinion on the legions of gartersnakes, watersnakes, racers and the like that have greeted me with a bite in response to being picked up gently.

There's always a chance that a snake might injure itself by biting the tongs. I have no way to prove it but I think such an injury is likely to be minor if indeed it ever happens. On the other side of the coin, my opinion is that a large, heavy-bodied, muscular rattlesnake with a relatively thin and fragile neck is almost certain to be badly hurt if its head is pinned. Mr. Hoser suggests pinning the body first, then pinning the head as well, then picking up the snake. To me this implies amazing coordination, or perhaps stepping on the body to free up a hand (a bad idea). And even if it can be picked up like that, a large rattler is still likely to injure itself by its own violent writhing.

Often, my own purpose in using snake tongs is to pose a venomous snake for a photograph without removing it from the wild. The alternative would be to repeatedly pin the snake. It's quite clear to me which method is less likely to cause stress or injury to the snake. (Okay, I'll admit that it would be better still for the snake to simply settle for what photos are available without posing it.)

Finally, Mr. Hoser's argument as to how tongs violate Australia's anticruelty laws ("undue risk of injury") could just as well be applied to any *method of snake-capture and could easily be echoed by animal rights activists. That's just scary.*

Mike Dloogatch

Bull. Chicago Herp. Soc. 42(6):96-98, 2007

What You Missed at the May CHS Meeting

by John Archer
j-archer@sbcglobal.net

Here's my summary of Chris Lechowicz's presentation at the May meeting. I was showing my wife the copy of the PowerPoint presentation he was nice enough to lend me, rushing through much of it so that I wouldn't bore her with all that stuff nonherpers all too easily get bored with (ANOTHER snake?), and as we watched Chris's pictures of neat people and places and all the cute lemurs, she was beginning to talk about a trip to Madagascar. About halfway through, I think around the time I was describing the biting flies that constantly attacked the entire party for three days, or maybe when I happened to say that Chris thought it was the hottest place he'd ever been, or maybe it was the shots of swarming termites falling into everyone's food as they tried to eat, she decided Paris looked like a better destination. I didn't even get to the four hours in an open boat or dragging gear for a mile through the mud at low tide.

Chris Lechowicz is a past president of the Chicago Herpetological Society, the CHS's webmaster, current president of the Calusa Herpetological Society, technical coordinator and herpetologist for the Sanibel-Captiva Conservation Foundation in Florida, a graduate of Southern Illinois University in Carbondale with two degrees, currently working on his masters degree at Florida Gulf Coast University, and he plays bass guitar in a band. Just writing that exhausts me. All our speakers are such accomplished people, and here I sit worrying about getting the lawn mowed today. I also have to admit to being a friend of Chris's, or maybe he's the one that has to admit that. We've spent hours in a canoe together and days in a car, mostly while I provide invaluable help to him in pursuit of his studies of map turtles, genus *Graptemys*. Invaluable help consists of sitting in the front of a canoe while Chris paddles and I occasionally net a turtle. I also help drive and split the cost of the hotel rooms. His web site is graptemys.com.

Which brings us to Chris's talk. Bill Love runs Blue Chameleon Ventures (www.bluechameleon.org, see ad this issue) and conducts ecotours to the island of Madagascar. Chris, by way of being a friend of Bill's and a turtle and tortoise expert, managed to get invited as co-leader on a Madagascar tour that was a little different than the tours that Bill normally runs. This tour would try to do research on the four native tortoises of Madagascar, taking surveys of habitat and food preferences. Because the tortoises are all on the west coast of the island, and frequently in inaccessible and less visited areas, this would not be a typical tour. Accommodations are normally in hotels, but this tour would be sleeping some nights in tents, and, as it turned out, on the decks of boats.

Luxury-class accommodations. Photograph by Bill Love.

Anyone who attended Dan Pearson's presentation at last September's meeting already knows about two of the native tortoises, *Pyxis arachnoides* and *P. planicauda*, the spider and flat-tailed tortoises. The other two are the radiated (*Geochelone radiata*) and the ploughshare (*G. yniphora*) tortoises. After many hours of flying, the group arrived at the capital of the island, with Chris giving us a little lesson in island grammar over the name Antananarivo, some geological background explaining how boas, basically New World snakes not found in Africa (except for the sandboa subfamily), might have gotten to an island off the African coast, and showing us maps to orient us. A really cute picture of a gorgeous child with a baby on her back, both with huge grins, was our first look at the people of Madagascar, and Chris showed that the lowland people were more African in appearance and the upland people more Indonesian. Most people want to live in the highlands because the lowlands are so hot. Heat was a recurring theme.

Photograph by Chris Lechowicz.

A local flight to the southwest and a nine-hour car trip took them into the range of the spider tortoises and radiateds. The habitat was dry forest and the heat was intense. Spiders were

Spider tortoise (*Pyxis arachnoides*). Photograph by Chris Lechowicz.

Radiated tortoise (*Geochelone radiata*). Photograph by Chris Lechowicz.

Flat-tailed tortoise (*Pyxis planicauda*). Photograph by Chris Lechowicz.

Ploughshare tortoise (*Geochelone yniphora*). Photograph by Chris Lechowicz.

The group (Chris Lechowicz seated with Bill Love's arm on his shoulder). Photograph by Chris Lechowicz.

Avenue of the Baobabs. Photograph by Chris Lechowicz.

found on the road, and radiateds were abundant where they were searching. Chris mentioned that he saw many of the invasive plants common to Florida, including prickly pear cactus and Australian pines. The plant champs were the baobab trees and later Chris included the obligatory picture of the Avenue of the Baobabs, including the cart driver who parks his cart in a picturesque position and then asks for money from photographers. Chameleons were everywhere, and Oustalet's chameleons (*Furcifer oustaleti*) were frequently seen crossing the road. Shots of the small fishing village they were based at and the dry terrain gave us a feel for the climate in that area and had me feeling the heat while sitting in the air-conditioned comfort of the museum. Radiateds were so abundant that we had pictures of two *in flagrante delicto*, soon followed by up close pictures of tortoise scat. Parents be warned, our meetings are not always PG!

The group then flew to a town on the central west coast of Madagascar, where the quarry was the flat-tailed tortoise. Chris had a shot of himself in an open-air internet café where he managed to catch up with his emails. He said that it was strange to be using computers in a place with no air conditioning, one hundred ten degree heat, and blowing dust. Here they visited the Kirindy Preserve and, searching for three days while being eaten by flies, managed to find one flat-tailed. The tortoises were not abundant, but Chris had photos of a ground boa (*Acrantophis madagascariensis*) biting Bill Love and a giant Madagascar hognose (*Leioheterodon madagascariensis*) biting Bill Love, and a common leaf-tail gecko (*Uroplatus fimbriatus*) biting Bill Love. All this was after Bill had assured the group that they had nothing to worry about from the animals they encountered on the tour. This was where the group also found that termites are really attracted to lights. Chris showed thousands flying over and falling in the food. Plated lizards (*Zonosaurus laticaudatus*) were so unafraid that they would climb onto the plate and eat while Chris was trying to eat. Most of the animals on the island had little or no fear of man, so close encounters were the norm. Shots of geckoes filled his presentation, some of the more memorable being the Madagascar day gecko (*Phelsuma madagascariensis*), the pictus gecko (*Paroedura pictus*), and my favorite, the satanic leaf-tail gecko (*Uroplatus phantasticus*). Chris said that every

Satanic leaf-tail gecko (*Uroplatus phantasticus*). Photograph by Chris Lechowicz.

Parson's chameleon (*Calumma parsonii*). Photograph by Chris Lechowicz.

time he looked up, a lemur was watching. He had lots of "aaaaw" pictures of lemurs.

The last tortoise, the ploughshare tortoise or angonoka remained to be found, and this involved a trip to the north of Madagascar. Chris mentioned that this portion of the tour alone was worthy of a talk, and having heard the details (**days** together in a car), I will second him. Inaccessible by car at that time of year, the search began with a six-hour ride on a freighter that turned into fourteen, a 45-minute ride in an open boat that turned into four-and-a-half hours, a half-mile drag of all the supplies across a tidal mud flat, and a mile trek through the brush to reach the campsite. I don't want to go through a portion of that, let alone all of it, in one journey. As always, the heat was intense.

According to the park log, only three people had been there before Bill's group, and Chris didn't forecast that to increase dramatically. But the tortoises were there, and Chris showed us some nice hard-won pictures of the tortoises and the habitat. Getting out of the park involved another grueling boat ride in the Interior Minister's official boat.

The next picture was of everyone in a hotel pool, back in civilization, looking happy and relieved. Chris had more pictures and more stories. Naturally, he had lots of chameleon shots, including *Calumma brevicorne*, the tiny *Brookesia superciliaris*, Parson's chameleon (*Calumma parsonii*), and the panther chameleon (*Furcifer pardalis*). He had more shots of people and places and bugs and frogs. His talk engaged the kids and the adults, and we felt a little of the wild ride his trip must have been. We suffered with him, laughed with him, and sweated with him. I don't think that I'll get my wife to go to Madagascar, but, hey, I'm a herper. What're a few inconveniences? Book me, Bill.

Herpetology 2007

In this column the editorial staff presents short abstracts of herpetological articles we have found of interest. This is not an attempt to summarize all of the research papers being published; it is an attempt to increase the reader's awareness of what herpetologists have been doing and publishing. The editor assumes full responsibility for any errors or misleading statements.

FOOD HABITS OF MORELET'S CROCODILE

S. G. Platt et al. [2006, Herpetological Journal 16(3):281-290] studied the food habits and size-related dietary patterns of Morelet's crocodile (*Crocodylus moreletii*) in freshwater wetlands of northern Belize (1992–2000). Crocodiles (n = 420) were classified as hatchlings, small juveniles, large juveniles, subadults or adults based on total length. Stomach contents were obtained primarily by stomach flushing. Prey items included aquatic and terrestrial insects, arachnids, aquatic gastropods, crustaceans, fish, amphibians, reptiles, birds and mammals. Based on the percent occurrence of recovered prey items, it was concluded that the smallest size classes feed largely on insects and arachnids. Large juveniles broadened their diet to include aquatic gastropods, crustaceans, fish and non-fish vertebrates. Insect and arachnid consumption declined sharply among subadults, and increasing amounts of aquatic gastropods and fish were recovered from this size class. The adult diet consisted mainly of aquatic gastropods, fish and crustaceans. Dietary diversity was greatest among large juveniles and subadults. Conversely, hatchlings and small juveniles had the most specialized (least diverse) diet owing to a reliance on insects and arachnids. Dietary overlap was greatest between adjacent size classes, and lowest between the smallest and largest size classes. This report also includes field observations of prey-specific foraging behaviors.

COEXISTENCE AMONG SALAMANDER LARVAE

R. Brodman and H. D. Krouse [2007, Herpetologica 63(2): 135-143] note that species of pond-breeding salamanders in the Great Lakes region often coexist with unisexual (all-female) populations that compete with larvae and are sexual parasites on adult males. The authors evaluated the effects of interactions with the larvae from unisexual salamander (*Ambystoma laterale*-complex) populations on blue-spotted (*A. laterale*) and small-mouthed salamander (*A. texanum*) larvae. Observations in natural ponds were coupled with mesocosm and laboratory approaches to investigate the roles of competition, predation, microhabitat partitioning, and behavior on the coexistence of these populations. Unisexual salamander larvae increased mortality, reduced growth, and were observed to attack and bite small-mouthed and blue-spotted salamander larvae in mesocosms. Unisexual larvae were competitively superior to blue-spotted salamander larvae, but competitively equal to small-mouthed salamander larvae. Laboratory experiments confirmed field observations that both species increased their use of refuges in the presence of unisexual larvae and that this behavior resulted in niche partitioning. Blue-spotted salamander larvae were less active in the presence of unisexuals; however, smallmouth larvae increased activity and use of refuges in the presence of larger intraguild predators. The hypothesis that microhabitat partitioning and altered activities minimize the effects of competition and predation was supported.

DIET OF THE COQUI IN HAWAII

K. H. Beard [2007, Copeia 2007(2):281-291] notes that because of high densities and generalist feeding behavior, the introduced frog, *Eleutherodactylus coqui*, has been hypothesized to consume and potentially reduce endemic invertebrates in Hawaii. To address this hypothesis, the author compared *E. coqui* diets to invertebrate abundances in 11 sites on the islands of Hawaii and Maui in the summer of 2004. At each site, between 22 and 119 frogs were collected from 20 × 20-m plots, and invertebrates were taken from light traps, beating trays and leaf litter samples. Prey items in frog stomachs were identified to order, and invertebrates collected in environmental samples were identified to the lowest taxonomic category possible. Multivariate analyses of diet content and invertebrates collected at each site suggest that most prey was from the leaf litter. Non-native ants and amphipods comprised 30% and 22%, respectively, of the total prey items consumed. These non-native invertebrates were more abundant in stomachs of *E. coqui* than in the environment indicating a preference for these species. There was little evidence that *E. coqui* were reducing important invertebrate pests. No mosquitoes were found in stomachs, and termites comprised < 1% of the total prey items. Arthropod orders containing endemic species that appear most vulnerable to *E. coqui* predation include Acarina (mites), Coleoptera (beetles), Collembola (springtails), and Diptera (flies), which each made up > 2% of the diet of *E. coqui*. Dominant prey items in frog stomachs differed among study sites suggesting that frogs are opportunistic feeders and forage on abundant prey items. *Eleutherodactylus coqui* management should focus on areas with endemic invertebrates of concern because it is these locations where *E. coqui* may have the greatest impact.

POND-BREEDING SALAMANDER DEMOGRAPHICS

K. E. Kinkead and D. L. Otis [2007, Herpetologica 63(2): 151-162] note that it has long been accepted that amphibians can skip breeding in any given year, and environmental conditions act as a cue for breeding. This paper quantifies temporary emigration or nonbreeding probability for mole and spotted salamanders (*Ambystoma talpoideum* and *A. maculatum*). An estimated 70% of mole salamanders may skip breeding during an average rainfall year and 90% may skip during a drought year. Spotted salamanders may be more likely to breed, with only 17% avoiding the breeding pond during an average rainfall year. The authors illustrate how superpopulations can be estimated using temporary emigration probability estimates. The superpopulation is the total number of salamanders associated with a given breeding pond. Although most salamanders stay within a certain distance of a breeding pond for the majority of their life spans, it is difficult to determine true overall population sizes for a given site if animals are only captured during a brief time frame each year with some animals unavailable for capture at any time during a given year.

DICE SNAKE DIETS

L. Luiselli et al. [2007, Copeia 2007(2):426-435] note that the dice snake (*Natrix tessellata*) is an aquatic colubrid that is known for having a basically piscivorous diet and a female-biased sexual size dimorphism (larger females). The feeding habits of three populations of *N. tessellata* from Mediterranean streams in central Italy were studied. The three streams differed in terms of their water regimes, one being seasonal and two being perennial. More than 2,000 snake individuals were handled for food items, and 1200+ prey items were collected. The percentage of fed snakes was significantly influenced by the study area and by the interaction term between study area and season (i.e., by the hydric regime). Fishes accounted for over 90% of the snake diets at all study areas, the most common prey species being cyprinids. Overall, the three snake populations had similar taxonomic diet composition. There was a significant ontogenetic change in diets in all populations. There were also significant intersexual differences in prey composition, with the females taking more *Scardinius erythrophtalmus* fishes and more anurans, and the males more *Leuciscus souffia muticellus*. The various fish species found at the three study areas (15 species) were classified in terms of six independent ecological characteristics in order to investigate what factors make a given prey species suited or not for dice snakes. It appeared that *N. tessellata* selected mainly fish species that were gregarious, small to medium sized, active foraging, diurnal, and not using mud as preferred substratum. It was also found that the seasonal desiccation of the streambed of one study area caused a shift in the diet composition of these snakes, with males and juveniles being the categories where the seasonal dietary shift was more evident. Males preyed especially on the fishes *S. erythrophtalmus* and *Leuciscus cephalus*, and the juveniles preyed upon *Leuciscus s. muticellus*, whereas in spring their primary prey was *Alburnus a. alborella.*

DESERT TORTOISE HIBERNATION

K. E. Nussear et al. [2007, Copeia 2007(2):378-386] examined the onset, duration and termination of hibernation in desert tortoises (*Gopherus agassizii*) over several years at multiple sites in the northeastern part of their range, and recorded the temperatures experienced by tortoises during winter hibernation. The timing of hibernation by desert tortoises differed among sites and years. Environmental cues acting over the short-term did not appear to influence the timing of the hibernation period. Different individual tortoises entered hibernation over as many as 44 days in the fall and emerged from hibernation over as many as 49 days in the spring. This range of variation in the timing of hibernation indicates a weak influence at best of exogenous cues hypothesized to trigger and terminate hibernation. There do appear to be regional trends in hibernation behavior as hibernation tended to begin earlier and continue longer at sites that were higher in elevation and generally cooler. The emergence date was generally more similar among study sites than the date of onset. While the climate and the subsequent timing of hibernation differed among sites, the average temperatures experienced by tortoises while hibernating differed by only about five degrees from the coldest site to the warmest site.

TRANSLOCATED BOX TURTLES

C. D. Rittenhouse et al. [2007, J. Herpetology 41(1):115-121] note that translocation of terrestrial turtles occurs to mitigate habitat loss, increase population size or genetic diversity, and to establish new populations. The success of many translocation efforts often depends on social and economic factors, but ecological factors may also affect translocation success. The authors used radiotelemetry to evaluate three-toed box turtle (*Terrapene carolina triunguis*) movements before and after translocation from a continuously forested site to a highly fragmented site and made comparisons to resident turtles. The average distance moved between consecutive 28-h relocations (dist_move) pretranslocation versus posttranslocation depended on turtle origin. Turtles translocated from the continuously forested site had greater mean dist_move following translocation, whereas resident turtles at the fragmented site had similar dist_move in both periods. Translocated turtles traveled greater total distances, had greater net displacement, and greater home-range size than resident turtles. Additionally, translocated turtles had directed movements, whereas resident turtles did not. Homing behavior or directed movement toward continuous forest adjacent to the release site may account for the movement patterns observed. Future translocations should consider the landscape context of the release sites as well as the landscape context of the original capture location.

CHEMICAL DISCRIMINATION BY A DIURNAL GECKO

J. M. Hoare et al. [2007, Herpetologica 63(2):184-192] note that animal life history strategies evolve in response to a range of selective pressures, and often are tightly linked to sensory cues. Squamate reptiles possess well-developed chemosensory systems, which evolved early in their history and remain highly conserved. However, chemosensory abilities are secondarily reduced in primarily visual agamid and chameleonid lizards, casting doubt on the ubiquity of reliance on chemosensory cues among squamates. Diurnal geckos from New Zealand avoid predators using visual crypsis and are primarily ambush foragers; reliance on visual cues may be a product of strong avian predation pressure and minimal influence from mammals and snakes for the past 80 my. New Zealand's diurnal geckos were used to test the role of local adaptation versus evolutionary conservatism in defining chemosensory systems. Specifically, the authors tested whether Marlborough green geckos, *Naultinus manukanus*, use chemoreception to detect and behaviorally respond to (1) food, (2) opposite-sex conspecifics, and (3) native reptilian predators (tuatara, *Sphenodon punctatus*). Chemosensory cues mediated gecko interactions with all three stimuli tested: (1) the scent of fruit induced greater exploratory behavior; (2) male geckos responded to scent of female conspecifics by increasing lingual sampling and activity; (3) tuatara fecal cues (but not skin secretions) elicited characteristic antipredator freeze behavior in geckos. Neither the primarily visual life history strategies nor the reduced range of predators of New Zealand's diurnal geckos appears to have reduced their chemosensory abilities relative to other noniguanid squamate reptiles. Instead, these findings support the notion that chemosensory traits remain highly conserved.

TADPOLE ANTIPREDATOR RESPONSES

M. J. Jowers et al. [2006, The Herpetological Journal 16(4): 337-346] report that the stream frog, *Mannophryne trinitatis*, lives in and beside steep mountain streams of Trinidad's Northern and Central ranges. Male frogs have strong antipredator behavior and prefer to deposit tadpoles in pools that lack predators (particularly the fish *Rivulus hartii* and the freshwater prawn *Macrobrachium carcinus*). The two predators are rarely found in the same stream and different *M. trinitatis* populations may show specific antipredator behavior to the predators they encounter in the wild. To assess tadpole spatial avoidance of predators, the authors presented small and larger tadpoles from four *M. trinitatis* populations to each predator. Three tadpole sources were from the Northern Range: Mount Saint Benedict, Lopinot (where *R. hartii* is abundant), and the Maracas Bay area (where *M. carcinus* is present); the fourth was from Tamana Cave, Central Range, where neither predator occurs. To determine predator detection mechanisms employed by the tadpoles, the predators were presented in three container types: a mesh cage (for chemical and visual detection), an opaque container with holes (chemical but no visual detection), and a transparent container (visual but no chemical detection). Different sized tadpoles (large and small) showed the same response to predators, and tadpoles principally used chemical cues to detect predators. All populations showed a stronger response to the presence of *R. hartii* than to *M. carcinus*. This, the authors attribute to the restricted distribution of *M. carcinus* and to the few sympatric zones between the tadpoles and these predators. Thus tadpoles lacked a specific antipredator response to *M. carcinus*. Naï ve tadpoles from Mount Saint Benedict and Tamana that had never previously encountered either of the predators showed strong antipredator responses, suggesting that the antipredator response is likely to be inherited.

PIG FROGS IN HARVESTED VS. PROTECTED AREAS

C. A. Ugarte et al. [2007, Copeia 2007(2):436-448] noted distinct differences in body size among three *Rana grylio* populations in areas of the Florida Everglades that differ in frog harvest pressure and hydroperiod. Frogs from two populations are harvested regularly throughout the year, while those in the third are protected from harvest. The authors compared seasonal and sex differences in diet, reproduction and growth across these populations to examine life-history patterns. By volume, crayfish and anurans were the most abundant prey items for all adults across sites. Frogs from drier sites consumed more crayfish than frogs from the wettest site. Anurans were abundant in the diet during the wet season, while crayfish and fish were abundant during the dry season. More frogs with empty stomachs were found during the wet season than the dry season. Feeding, growth and fat deposition were greatest during the dry season at all sites. Although females were found in all reproductive stages throughout the year, the highest percentage had mature ova during the late dry season and spent ovaries during the early wet season. Individual growth patterns were similar at all sites and matched historical growth data from the 1950s. Differences in body size among sites were most likely attributable to differential mortality (i.e., harvest pressure, predation) rather than to differences in food access or growth.

OBSERVING THE CAPE COBRA

T. Phelps [2007, The Herpetological Bulletin 99:29-35] began research during September 2004 on the southern adder, *Bitis armata*, and the puff adder, *Bitis arietans*, at DeHoop, a National Nature Reserve and biodiversity "hotspot," managed by the Western Cape Nature Conservation Board (now Cape Nature). It soon became apparent that the Cape cobra was a prominent species on the reserve, and presented an opportunity to extend the research program to include this familiar but little studied venomous snake. The study included general observations throughout the reserve, but also more detailed observations were undertaken of individual cobras at their respective refugia. Results so far show that the Cape cobra is essentially diurnal, and exhibits a pronounced degree of' sedentary behavior. Observations have also shown that this species is a feeding generalist; in addition to a diet of rodents, birds, snakes and other reptiles, observed feeding behavior also included cannibalism of conspecifics, and scavenging road-killed snakes.

RED-BACKED SALAMANDER CHEMICAL SIGNALS

B. J. Dantzer and R. G. Jaeger [2007, Herpetologica 63(2): 176-183] report that previous research suggests that female red-backed salamanders (*Plethodon cinereus*) in Virginia court biennially whereas males court annually. Therefore, males may face a choice to court either gravid or nongravid females. Because gravid females represent an immediate insemination opportunity (whereas nongravid females do not), male red-backed salamanders may be under selection to be able to distinguish the reproductive status of conspecific females. The authors conducted an experiment to determine if males could discriminate between gravid and nongravid conspecific females through volatile chemical signals. Focal males were allowed to establish territories in testing arenas for 5 d and then were exposed to three treatments in a randomized order: volatile chemical signals from gravid females, nongravid females, and a control (blank filter paper). Randomization tests revealed that focal males exhibited significantly more aggressive behavior when they were exposed to volatile chemical signals from nongravid females than when they were exposed to those from gravid females and the control. The authors infer that male red-backed salamanders can determine the reproductive status of conspecific females through volatile chemical signals, which may influence their social associations.

HUNTING SITE FIDELITY

I. Sazima and O. A. V. Marques [2007, The Herpetological Bulletin 99:36-38] report on hunting site fidelity by the eastern green whiptail (*Philodryas olfersii*), a widely foraging colubrid, in southeast Brazil. The authors recorded an adult *P. olfersii* (total length about 120 cm) visiting, and successfully foraging on, a small tree for a span of about two months. Snakes are known to employ two major hunting strategies, ambush or wide foraging. Whatever the strategy a snake supposedly chooses potentially profitable hunting grounds. Whereas hunting site fidelity has been recorded for a few ambushing species, there seem to be no previous records available for such fidelity for a widely foraging snake.

Unofficial Minutes of the CHS Board Meeting, May 18, 2007

Linda Malawy called the meeting to order at 7:37 P.M. Board members Josh Chernoff, Deb Krohn and Erik Williams were absent.

Officers' Reports

Recording Secretary: Kira Geselowitz read the minutes of the March 16 board meeting, taken by the marvelous Steve Sullivan, and they were accepted.

Treasurer: March and April financial summaries were read; we're looking pretty good. Financially, ReptileFest was the best we've had! Celebratory clapping was shared by all. Compensating speakers for mileage was discussed; we decided to reimburse based on the standard IRS allowance.

Membership Secretary: Membership is slightly higher than at this time last year.

Vice President: Jim Harrison of the Kentucky Reptile Zoo will speak in July.

Corresponding Secretary: Nothing much new. The CHS received a thank-you card from the Great Lakes Pet Expo.

Sergeant-at-arms: There were 48 attendees at the April 25 general meeting.

Committee Reports

Shows:

- Peggy Notebaert Museum on June 2-3, 10 A.M. - 3 P.M.
- We can sell photos at the Oak Park Library Harry Potter Festival, July 20, 4 P.M. - 7 P.M.
- August 13-14, Illinois State Fair in Springfield
- June 16 at the Cosley Zoo in Wheaton, 10 A.M. - 3 P.M.
- Thank you to Linda, Bob, Dan and Jenny for doing the Project Exploration Dinner with the Dinosaurs
- The Reptile and All Animal Show in Wheaton will be May 20, June 2 and June 17, 10 A.M. - 3 P.M.
- Grayslake Reptile Show will be on June 9 and will have other dates too
- There will be a Chicago Wilderness event on June 16 in Jackson Park
- July 14 will be the Argonne National Laboratory Employee Picnic. We should remember to bring a "See Us at ReptileFest Next Spring" poster
- A photo booth at Tinley is a possibility. Anyone wanting a hotel room should book early and be sure to mention the reptile show for better rates

Raffle: There are quite a few great donations in, including one from PetCo and many more.

Library: Wehave sold duplicate copies of some books. Also, Nancy Kloskowski made a big donation, thank you!

Adoptions: Bob Bavirsha suggested that there should be more on the CHS forum about what has been adopted. Rich Crowley suggested that we try to get people to bring their adopted animals to Show and Tell.

General Meetings: Active members should remember to bring in animals to add interest to the meetings.

Chicago Wilderness: Leave No Child Inside programming wants lots of links with the CHS. It's a win-win situation because we will be associated with them and get our name out.

Nominating Committee: Linda will be putting it together.

Old Business

ReptileFest 2007: Thank you to everyone who showed up, and to the volunteers too! Plus, there were no alligators in the pool this year. Congratulations to Dan Nathan for winning the Exhibitors' Choice Award, Joey Robinson for winning the New Exhibitor Award, and Dick Buchholz for winning the People's Choice Award. ReptileFest 2008 is to be held April 12-13.

Wildlife Discovery Center Visit: There was great attendance and everyone had fun. Thank you, Jason Hood, for putting together yet another fantastic event.

Kentucky Trip: The trip to the Louisville Zoo and Kentucky Reptile Zoo will most likely be September 14-15 and the board meeting will be moved accordingly. Jason and Linda are planning it.

New Business

Calendar: The June board meeting will be hosted by Josh Chernoff. July and August will most likely be at North Park Village. September will be at Linda's, October will be at Steve Sullivan's, Mike Dloogatch will host again in November, and Gary Fogel will host December.

Reptiles: The Beautiful and the Deadly: This traveling exhibit will have a "soft opening" on October 4 at the Peggy Notebaert Nature Museum. There will be venomous species (mostly exotic) and a big focus on education. They are interested in doing a lot of cross-promotion between their exhibit and the CHS, like sharing exhibits. Please contact Lauren Nassef with any ideas, her email is lnassef@naturemuseum.org

Field Museum: The CHS is helping organize animals for their Darwin exhibit, to run from June 15, 2007, until January 2008.

Other:

- Dick Buchholz would like more advertising signage for the shows we attend. Mike Scott is willing to help out with that. There should also be sign-up sheets for our mailing list when we're attending shows.
- We should keep in touch with the Shedd to share presentation materials.
- A picnic at a place like the Grove would be a nice society event and would promote ties between us and nature centers.
- November 10 is Snake Day at the Milwaukee Public Museum.

Ideas and Suggestions

- We should look into a tour of Jim Nesci's basement.
- Comments were made as to the irony of CHS being invited to present snakes at the Harry Potter Festival in Oak Park, as

they currently have city laws banning the ownership of constricting snakes.

Round Table

- Cindy Rampacek's husband held his first alligator at ReptileFest.
- Mike Scott suggested taking more CHS nature walks.
- The recording secretary was sad to announce that she will not be around for the June through September board meetings. Cindy and Steve said they can possibly help out with that.
- Dan Bavirsha will not be able to attend ReptileFest '08, it is a serious pity.
- www.stevedalepetworld.com has a podcast of Steve and Linda promoting 'Fest prior to the Chicagoland Family Pet Show.

The meeting was adjourned at 10:32 P.M.

Respectfully submitted by Kira Geselowitz

THANK YOU

This year's ReptileFest was a record-setting event. You helped educate, fascinate and engage over 4,500 people at our largest fundraiser of the year.

If you were a vendor, we appreciate the variety of goods that you brought.

We thank those of you who labored to set up tables, pass out water and spell exhibitors.

Our sponsors, Zoo Med and Timberline, were generous with their people, products and funds.

But most of all, we thank our exhibitors, without whom there would have been nothing to attract the crowds of people who attended. Your willingness to display your animals and put in the time required is greatly appreciated.

We sincerely hope that along the way everyone had a good time.

ReptileFest 2008 will take place April 12–13.

Be there, and find out what you've been missing.

Advertisements

Feeder Roaches: *Blaptica dubia*, all sizes, meaty and nutritious. Free samples to CHS members, or buy a starter colony to make your own. Superior to crickets in every way. This non-flying, slow moving, non-climbing species is very easy to breed and easy for your reptiles to catch. One starter colony of 100+ mixed sizes, $25. If you don't know about roaches as feeders, read up on them; you'll never need to deal with the hassles of crickets again. E-mail: aasagan@msn.com

For sale: rats and mice—pinkies, fuzzies and adults. Quantity discounts. Please send a SASE for pricelist or call Bill Brant, *THE GOURMET RODENT*, 6115 SW 137th Avenue, Archer FL 32618, (352) 495-9024, E-mail: GrmtRodent@aol.com.

For sale: from **The Mouse Factory**, producing superior quality, frozen feeder mice and rats. We feed our colony a nutrtionally balanced diet of rodent chow, formulated especially for us, and four types of natural whole grains and seeds. Mice starting from: pinks, $.17 each; fuzzies, $.24 each; hoppers, $.30 each; weanling, $.42; adult, $.48. Rats: starting with pinks at $.45 each, to XL at $1.80 each. Discount prices available. We accept Visa, MC, Discover or money orders. PO Box 85, Alpine TX 79831. Call **toll-free** at (800) 720-0076 or visit our website: < http://www.themousefactory.com> .

For sale: **high quality frozen feeders**. Over a decade of production and supply. Seven sizes of mice availabe: small newborn pinks up to jumbo adults. Prices start at $25 per 100. Feeders are separate in the resealable bag, not frozen together. Low shipping rates. Free price list. Kelly Haller, 4236 SE 25th Street, Topeka KS 66605, (913) 234-3358 evenings and weekends.

For sale: Graptemys.com T-shirts, 100% cotton, pre-shrunk, pigment-dyed shirts with the Graptemys.com embroidered logo. These are very high quality shirts with that stylish faded look. Sizes S-M-L-XL-XXL. Colors: Pacific blue, nautical red, brick red, plum, granite, khaki green and putty. All profits made from these shirts goes directly to in situ *Graptemys* research. $20 each with $3.00 shipping. Email: chris@graptemys.com or call (239) 437-4148 to order. You can look at the shirts at http://www.graptemys.com/shirts.htm

For sale: books. *The Snakes of Arizona* by Jack Fowlie, 1965, 164 pp., b&w photo of each species and subspecies, range maps, hardbound, $40; *Birds of Pine-Oak Woodland in Southern Arizona and Adjacent Mexico* by Joe T. Marshall, Jr., 1957, 125 pp., 2 color plates, 26 b&w drawings, good descriptions of this habitat in this herpetologically-rich area, hardbound, $30; *Reptiles of Australia* by Charles Barrett, 1950, 168 pp., many b&w photos and drawings, no DJ, hardbound, $80; *Snakes & Lizards of Australia* by David McPhee, 1966 (1963), 125 pp., many b&w photos, small, pocket-book size, bottoms of last 30 pp. water wrinkled, softbound, $25; *The Reptiles* by Archie Carr, 1977 (1963), 192 pp., many excellent color and b&w photos, an interesting treatment by this noted herpetologist and writer, hardbound, $9. All books in excellent condition except as noted. $2.50 postage and handling for orders under $25, free for orders $25 and over. William R. Turner, 7395 S. Downing Circle W., Centennial CO 80122; phone (303) 795-5128; e-mail: toursbyturner@aol.com.

For sale: Jungle carpet pythons hatchlings from trophy bloodlines (parents are vivid yellow on jet black and colorfast with age), $200 each or $300 for 1.1 pair. E-mail John for pictures or more information: junglejohn@tds.net.

For sale: two male and two female adult Danube crested newts (*Triturus dobrogicus*), c.b.b., $100 for all four; unused Creative Reptile cage 18" × 18" × 36"h, glass and screen—good for chameleons or other herps requiring good air circulation, $100; two custom-made plastic cages (constructed from IRIS VE175 totes), 48" × 18" × 14"h, with integral screen tops and single lift-out acrylic door for front access, with option to use bypass sliding glass doors (not included)—lid also lifts off for top access—good for colubrids, small monitors, terrestrial lizards, $50 each. Local pick-up only on all items. Email matthew-campbell@mindspring.com for more info or pictures.

For sale: Now taking reservations for rare/unusual gartersnakes & watersnakes. Expecting offspring in June: **Easterns**—leucistic $450, het leucistics $250-300/pair, albinos $250-275, melanistics $35-50, snow $395, flames $100, erythristic $100, erythristic × albino $150, silver—inquire, axanthic $50, granite $150, Florida $25 each/2 for $40. **Plains**—axanthic $75, albinos $75, anerythristic $40, snow (Nebraska/Iowa strains) $95, normals $25 each/2 for $40. **Red-sided**—albino $375, hets $350/pair, poss. hets $75-95, double het snow $295/pair, colorless × anerythristic—inquire, anerythristic $75, normals $25 each/2 for $40. **Eastern blacknecks** $95. **Wandering** melanistic $95. **California red-sideds**—normals $125, het hypomelanistic—inquire, **Puget Sound** $40, **Santa Cruz** $60, **Mesoamerican Highlands** $40, Florida blue striped (similis) $40. **Watersnakes**—banded albino $450, high red × albino $225 pair, het hypomelanistic Florida watersnake—inquire. Scott Felzer, (919) 365-6120 Eastern Time, email: sfelzersgarters@bellsouth.net. Web address is www.albinogartersnake.com

Herp tours: Adventure trips to **Madagascar**! Journey somewhere truly unique to seek and photograph nature on the world's least-studied mini-continent. For maximum herp fun and discovery, join Bill Love as we go where few people will ever venture in their lives. Let his experience assure a comfortable tour finding the most colorful and bizarre species on the planet! Get all the details at Blue Chameleon Ventures' comprehensive new website: < http://www.bluechameleon.org> , E-mail: bill@bluechameleon.org, or call (239) 728-2390.

Herp tours: The beautiful Amazon! Costa Rica from Atlantic to Pacific! Esquinas Rainforest Lodge, the Osa Peninsula, Santa Rosa National Park, and a host of other great places to find herps and relax. Remember, you get what you pay for, so go with the best! GreenTracks, Inc. offers the finest from wildlife tours to adventure travel, led by internationally acclaimed herpers and naturalists. Visit our website < http://www.greentracks.com> or call (800) 892-1035, E-mail: info@greentracks.com

Virtual Museum of Natural History at www.curator.org: Free quality information on animals—emphasis on herps—plus expedition reports, book reviews and links to solid information. Always open, always free.

Line ads in this publication are run free for CHS members—$2 per line for nonmembers. Any ad may be refused at the discretion of the Editor. Submit ads to: Michael Dloogatch, 6048 N. Lawndale Avenue, Chicago IL 60659, (773) 588-0728 evening telephone, (312) 782-2868 fax, E-mail: MADadder0@aol.com

UPCOMING MEETINGS

The next meeting of the Chicago Herpetological Society will be held at 7:30 P.M., Wednesday, June 27, at the Peggy Notebaert Nature Museum, Cannon Drive and Fullerton Parkway, in Chicago. This will be our popular and always well-attended annual **Show & Tell** meeting. Bring an animal that you find interesting for one reason or another and be prepared to give a short (under five minutes) presentation to the group. Don't be shy. Age (yours) or commonness (the animal's) should not be a limitation. Guidelines for the occasion: don't bring venomous reptiles or endangered species, and please bring only amphibians or reptiles (this means no worms, tarantulas or other invertebrates).

At the July 25 meeting, **Jim Harrison**, director of the Kentucky Reptile Zoo, will speak to our group on "The Evolution of Venom Extraction." Jim has been studying venom for over 30 years and currently extracts from more than 600 animals per week.

The regular monthly meetings of the Chicago Herpetological Society take place at Chicago's newest museum — the **Peggy Notebaert Nature Museum**. This beautiful new building is at Fullerton Parkway and Cannon Drive, directly across Fullerton from the Lincoln Park Zoo. Meetings are held the last Wednesday of each month, from 7:30 P.M. through 9:30 P.M. Parking is free on Cannon Drive. A plethora of CTA buses stop nearby.

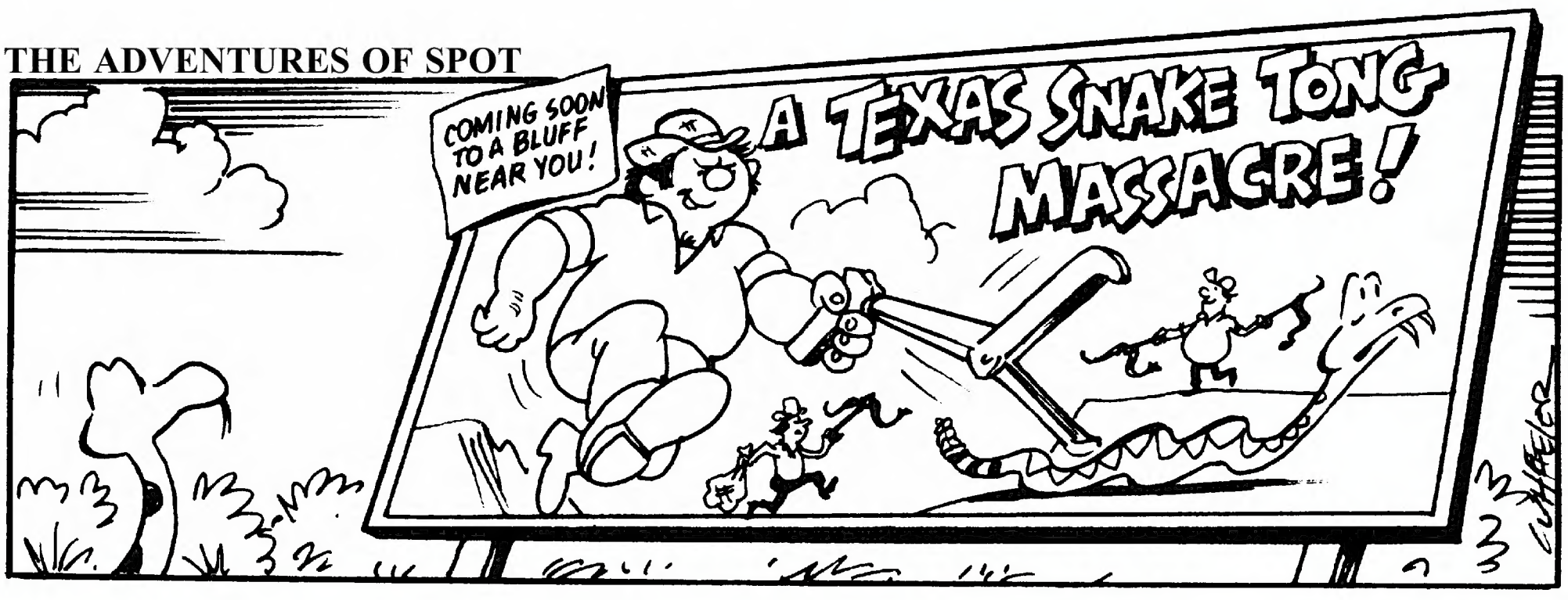
Board of Directors Meeting

Are you interested in how the decisions are made that determine how the Chicago Herpetological Society runs? And would you like to have input into those decisions? If so, mark your calendar for the next board meeting, to be held July 13. For information as to where the meeting will be held and directions, call Mike Dloogatch at (773) 588-0728.

The Chicago Turtle Club

The monthly meetings of the Chicago Turtle Club are informal; questions, children and animals are welcome. Meetings normally take place at the North Park Village Nature Center, 5801 N. Pulaski, in Chicago. Parking is free. For more info visit the CTC website: http://www.geocities.com/~chicagoturtle.

THE ADVENTURES OF SPOT



Periodicals Postage
Paid at Chicago IL

CHICAGO HERPETOLOGICAL SOCIETY

Affiliated with the Chicago Academy of Sciences

2430 North Cannon Drive • Chicago, Illinois 60614